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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/970,969	10/03/2001	Jonathan F. Tait	UOFW117625	3199

26389 7590 12/11/2003

CHRISTENSEN, O'CONNOR, JOHNSON, KINDNESS, PLLC
1420 FIFTH AVENUE
SUITE 2800
SEATTLE, WA 98101-2347

EXAMINER

HUFF, SHEELA JITENDRA

ART UNIT	PAPER NUMBER
----------	--------------

1642

DATE MAILED: 12/11/2003

ST

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/970,969

Applicant(s)

TAIT ET AL.

Examiner

Sheela J Huff

Art Unit

1642

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-38 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22-27 is/are allowed.
- 6) ☒ Claim(s) 21, 28, 32 and 36-38 is/are rejected.
- 7) ☒ Claim(s) 29-31 and 33-35 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Claims 21-38 are pending.

Information Disclosure Statement

The IDS filed 10/3/01 has been considered and an initialed copy of the PTO-1449 is enclosed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 36-38 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 339285 or Saino et al US 5591633.

The EP discloses the sequence in Figure 1 which has about 99% similarity to SEQ ID NO. 1, 3 and 5 (see attached sequence alignments). It is inherent that this sequence will hybridize to the complement strand of that in the reference and that the complement of the strand in the reference will hybridize to the sequence of the instant invention.

Saino et al discloses SEQ ID No. 2 which has about 99% similarity to SEQ ID NO. 1, 3 and 5 (see attached sequence alignments). It is inherent that this sequence will hybridize to the complement strand of that in the reference and that the complement of the strand in the reference will hybridize to the sequence of the instant invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 21, 28 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/04294 or Kasina et al US 5968477 in view of Giblin et al Bioconjugate Chem. vol. 8 p. 347 (1997)..

WO98/04294 and Kasina et al US 5968477 are related in the US patent is the priority document in the WO. Only the WO will be discussed in detail, since both references are the same. The WO discloses a modified annexin, preferably annexin V, that can be made recombinantly (pages 4 and 7 bottom), wherein the modification is at the N-terminus and comprises the addition of amino acid residues (at least one of which provides an accessible sulfhydryl) (page 8, lines 5-10) and, preferably the sulfhydryl is cysteine (page 9, lines 3-8). Furthermore, the amino acids residues in the N-terminus modification can include gly (page 20, lines 9). Examples VIII-X disclose specific methods for making a modified annexin recombinantly.

The primary references do not disclose the chelation moiety to contain a glycine or to be cys-gly-cys.

Giblin et al disclose the chelate moiety N-acetyl-cys-gly-cys-gly complexed with Rhenium and conjugated to alpha-melanotropin. See abstract and entire reference.

In view of the fact that annexin, especially annexin V, can readily be modified at the amino terminus to contain a short peptide which functions as a chelating moiety and since the short peptide needs to include a cys and can be made recombinantly and since Giblin et al clearly shows that N-acetyl-cys-gly-cys-gly is a known chelating moiety, it would have been obvious to one of ordinary skill in the art at the time of the invention to add any known chelating moiety to complex the radionuclide to annexin. Discerning the nucleic acid sequence for the Giblin et al chelation moiety is within the purview of one skilled in the art. Thus, it would have been obvious to chelate N-acetyl-cys-gly-cys-gly to the amino terminus of annexin V with the expected benefits of producing imaging or radioisotope delivery.

Claims 21, 28 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/04294 or Kasina et al US 5968477 in view of Dean et al (filed 3/31/95).

WO98/04294 and Kasina et al US 5968477 are related in the US patent is the priority document in the WO. Only the WO will be discussed in detail, since both references are the same. The WO discloses a modified annexin, preferably annexin V, that can be made recombinantly (pages 4 and 7 bottom), wherein the modification is at the N-terminus and comprises the addition of amino acid residues (at least one of which provides an accessible sulfhydryl) (page 8, lines 5-10) and, preferably the sulfhydryl is cysteine (page 9, lines 3-8). Furthermore, the amino acids residues in the N-terminus modification can include gly (page 20, lines 9). Examples VIII-X disclose specific methods for making a modified annexin recombinantly.

The primary references do not disclose the chelate moiety to contain a glycine and a cysteine or to be cys-gly-gly.

Dean et al disclose the chelation of Tc-99m, Re-186 or Re-188 through gly-gly-cys and cys-gly-gly to VIP peptides (see col. 8 lines 62+, col. 6 lines 30+).

In view of the fact that annexin, especially annexin V, can readily be modified at the amino terminus to contain a short peptide which functions as a chelating moiety and since the short peptide needs to include a cys and since this can be made recombinantly and since Dean et al clearly shows that cys-gly-gly is a known chelating moiety, it would have been obvious to one of ordinary skill in the art at the time of the invention it to any known chelating moiety to complex the radionuclide to annexin. Discerning the nucleic acid sequence for the Dean et al chelation moiety is within the purview of one skilled in the art. Thus, it would have been obvious to chelate cys-gly-gly to the amino terminus of annexin V with the expected benefits of producing imaging or radioisotope delivery.

Allowable Subject Matter

Claims 22-27 are allowed.

Claims 29-31 and 33-35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheela J Huff whose telephone number is 703-305-

Art Unit: 1642

7866. The examiner can normally be reached on Tuesday 5:30am-11:30am and
Fridays 6:00am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Anthony Caputa can be reached on 703-308-3995. The fax phone number
for the organization where this application or proceeding is assigned is 703-308-4242.

Any inquiry of a general nature or relating to the status of this application or
proceeding should be directed to the receptionist whose telephone number is 703-308-
1235.



Sheela J Huff
Primary Examiner
Art Unit 1642

sjh

QY 622 CGAAGTGTCTCATTGAGAAAGGCTTTGACAAGTACATGACTATATCAGGATTTCAA 681
DB 613 CGAAGTGTCTCATTGAGAAAGGCTTTGACAAGTACATGACTATATCAGGATTTCAA 672
QY 682 ATTGAGAAACCATTTGACCGGAGACTTCTGGCAATTTAGAGCACTACTCCTTGCTGTT 741
DB 673 ATTGAGAAACCATTTGACCGGAGACTTCTGGCAATTTAGAGCACTACTCCTTGCTGTT 732
QY 742 GTGAAATCTATTGCAAGTATACCTGCTACCTTCAGAGACCCCTCTATTTATGCTATCAAG 801
DB 733 GTGAAATCTATTGCAAGTATACCTGCTACCTTCAGAGACCCCTCTATTTATGCTATCAAG 792
QY 802 GGAGCTGGGACAGATGATCATACCTTCATCAGAGTCAATGTTTCCAGGAGTGAGATTGAT 861
DB 793 GGAGCTGGGACAGATGATCATACCTTCATCAGAGTCAATGTTTCCAGGAGTGAGATTGAT 852
DB 862 CTGTTTAAACATCAGGAAGGAGTTTAGGAAGAAATTTGCCACCTCTCTTTATTCATGATT 921
DB 853 CTGTTTAAACATCAGGAAGGAGTTTAGGAAGAAATTTGCCACCTCTCTTTATTCATGATT 912
QY 922 AAGGGAGATACATCTGGGGAGCTATAAGAAAGCTCTTCTGCTGCTCTCCGGAGAGATGAC 981
DB 913 AAGGGAGATACATCTGGGGAGCTATAAGAAAGCTCTTCTGCTGCTCTGTTGGAGAGATGAC 972

RESULT 5

US-08-125-746-2
Sequence 2, Application US/08125746
Patent No. 5591633

GENERAL INFORMATION:

APPLICANT: SAINO, YUSHI
APPLICANT: IWASAKI, AKIO
APPLICANT: SUDA, MAKOTO
TITLE OF INVENTION: ANTICOAGULANT POLYPEPTIDE
NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
ADDRESSEE: OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT,
ADDRESS: P.C.
STREET: 1755 S. Jefferson Davis Highway, Suite 400
CITY: Arlington
STATE: Virginia
COUNTRY: U.S.A.
ZIP: 22202

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/125,746
FILING DATE: 24-SEP-1993

CLASSIFICATION: 530

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/807,623

FILING DATE: 13-DEC-1991

PRIOR APPLICATION DATA:

APPLICATION NUMBER: JP 037227/1987

FILING DATE: 20-FEB-1987

APPLICATION DATA:

APPLICATION NUMBER: JP 184428/1987

FILING DATE: 23-JUL-1987

ATTORNEY/AGENT INFORMATION:

NAME: Oblon, No. 5591633man F.

REGISTRATION NUMBER: 24,618

REFERENCE/DOCKET NUMBER: 80-074-0 DIV

TELECOMMUNICATION INFORMATION:

TELEPHONE: (703) 413-3000

TELEFAX: (703) 413-2220

TELEX: 248855 OPAT UR

INFORMATION FOR SEQ ID NO: 2:

SEQUENCE CHARACTERISTICS:

LENGTH: 1567 base pairs

TYPE: nucleic acid
STRANDEDNESS: unknown
TOPOLOGY: unknown
MOLECULE TYPE: DNA (genomic)
FEATURE:
NAME/KEY: CDS
LOCATION: 136..1095
US-08-125-746-2

Query Match

Score 956.8; DB 1; Length 1567;

Best Local Similarity 99.8%; Pred. No. 1.8e-276;

Matches 958; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 22 ATGGACAGGTTCTCAGAGGACATGTGACTGACTTCCCTGGATTTGATGAGCGGGCTGAT 81
DB 136 ATGGACAGGTTCTCAGAGGACATGTGACTGACTTCCCTGGATTTGATGAGCGGGCTGAT 195
QY 82 GCAGAAACTCTTCGGAAGGCTATGAAAGGCTTGGGCACAGATGAGGAGAGCATCCTGACT 141
DB 196 GCAGAAACTCTTCGGAAGGCTATGAAAGGCTTGGGCACAGATGAGGAGAGCATCCTGACT 255
QY 142 CTGTTGACATCCCGAAGTAAATGCTCAGCGGACAGAAATCTCTGCAGCTTTTAAAGACTCTG 201
DB 256 CTGTTGACATCCCGAAGTAAATGCTCAGCGGACAGAAATCTCTGCAGCTTTTAAAGACTCTG 315
QY 202 TTTGGCAGGGATCTTCTGGATGACCTGAAATCAGAACTAACTGGAATAATTTGAAATAATTA 261
DB 316 TTTGGCAGGGATCTTCTGGATGACCTGAAATCAGAACTAACTGGAATAATTTGAAATAATTA 375
QY 262 ATTGTGCTCTGATGAAACCTCTCGGCTTTATGATGCTTATGAACTGAAACATGCTGTTG 321
DB 376 ATTGTGCTCTGATGAAACCTCTCGGCTTTATGATGCTTATGAACTGAAACATGCTGTTG 435
QY 322 AAGGAGCTGGAAACAAATGAAAGTACTGACAGAAATATTGCTTCAAGGACACCTGAA 381
DB 436 AAGGAGCTGGAAACAAATGAAAGTACTGACAGAAATATTGCTTCAAGGACACCTGAA 495
QY 382 GAAGTGGAGGACATCAACAAAGTTTATGAAAGAAATATGCTCAAGCTCGAAGATGAC 441
DB 496 GAAGTGGAGGACATCAACAAAGTTTATGAAAGAAATATGCTCAAGCTCGAAGATGAC 555
QY 442 GTGTGGGGGACACTTACAGGCTACTACAGCGGATGTTGGTGGTCTCTCTCAGGCTAAC 501
DB 556 GTGTGGGGGACACTTACAGGCTACTACAGCGGATGTTGGTGGTCTCTCTCAGGCTAAC 615
QY 502 AGAGACCTGATGCTGGAAATGATGAAGCTCAAGTTGAACAAAGATGCTCAGGCTTTATT 561
DB 616 AGAGACCTGATGCTGGAAATGATGAAGCTCAAGTTGAACAAAGATGCTCAGGCTTTATT 675
QY 562 CAGGCTGGAGAACTTAAATGGGGACAGATGAAGAAAGTTTATCAACATCTTTTGAACA 621
DB 676 CAGGCTGGAGAACTTAAATGGGGACAGATGAAGAAAGTTTATCAACATCTTTTGAACA 735
QY 622 CGAAGTGTCTCATTTTCAGAAAGGTTTTCAGAAAGTACATGACTATATCAGGATTTCAA 681
DB 736 CGAAGTGTCTCATTTTCAGAAAGGTTTTCAGAAAGTACATGACTATATCAGGATTTCAA 795
QY 682 ATTGAGAAACCATTTGACCGGAGACTTCTGCAATTTTAGAGCACTACTCCTGCTGTT 741
DB 796 ATTGAGAAACCATTTGACCGGAGACTTCTGCAATTTTAGAGCACTACTCCTGCTGTT 855
QY 742 GTGAAATCTATTGCAAGTATACCTGCTACCTTCAGAGACCCCTCTATTTATGCTATGAG 801
DB 856 GTGAAATCTATTGCAAGTATACCTGCTACCTTCAGAGACCCCTCTATTTATGCTATGAG 915
QY 802 GGAGCTGGGACAGATGATCATACCTTCATCAGAGTCAATGTTTCCAGGAGTGAGATTGAT 861
DB 916 GGAGCTGGGACAGATGATCATACCTTCATCAGAGTCAATGTTTCCAGGAGTGAGATTGAT 975
QY 862 CTGTTTAAACATCAGGAAGGAGTTTAGGAAGAAATTTTGGCACTCTCTTTTATTCATGATT 921
DB 976 CTGTTTAAACATCAGGAAGGAGTTTAGGAAGAAATTTTGGCACTCTCTTTTATTCATGATT 1035

QY 922 AAGGAGATACATCTGGGACTATAAGAAAGCTTCTTCTGCTCTCCCGGAGAAGATGAC 981
 Db 1036 AAGGAGATACATCTGGGACTATAAGAAAGCTTCTTCTGCTCTCCCGGAGAAGATGAC 1095

RESULT 6

US-08-125-746-4
 : Sequence 4, Application US/08125746
 : Patent No. 5591633
 : GENERAL INFORMATION:
 : APPLICANT: SAINO, YUSHI
 : APPLICANT: IWASAKI, AKIO
 : APPLICANT: SUDA, MAKOTO
 : TITLE OF INVENTION: ANTICOAGULANT POLYPEPTIDE
 : NUMBER OF SEQUENCES: 5
 : CORRESPONDENCE ADDRESS:
 : ADDRESSEE: OBLON, SPIVAK, MCLELLAND, MAIER & NEUSTADT,
 : ADDRESSEE: P.C.
 : STREET: 1755 S. Jefferson Davis Highway, Suite 400
 : CITY: Arlington
 : STATE: Virginia
 : COUNTRY: U.S.A.
 : ZIP: 22202

COMPUTER READABLE FORM:
 : MEDIUM TYPE: Floppy disk
 : COMPUTER: IBM PC compatible
 : OPERATING SYSTEM: PC-DOS/MS-DOS
 : SOFTWARE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:
 : APPLICATION NUMBER: US/08/125,746
 : FILING DATE: 24-SEP-1993
 : CLASSIFICATION: 530

PRIOR APPLICATION DATA:
 : APPLICATION NUMBER: US 07/807,623
 : FILING DATE: 13-DEC-1991

PRIOR APPLICATION DATA:
 : APPLICATION NUMBER: JP 037227/1987
 : FILING DATE: 20-FEB-1987

PRIOR APPLICATION DATA:
 : APPLICATION NUMBER: JP 184428/1987
 : FILING DATE: 23-JUL-1987

ATTORNEY/AGENT INFORMATION:
 : NAME: OBLON, NO. 5591633man F.

REGISTRATION NUMBER: 24,618
 : REFERENCE/DOCKET NUMBER: 80-074-0 DIV

TELECOMMUNICATION INFORMATION:
 : TELEPHONE: (703) 413-3000

TELEFAX: (703) 413-2220

TELEX: 248855 OPAT UR

INFORMATION FOR SEQ ID NO: 4:

SEQUENCE CHARACTERISTICS:
 : LENGTH: 957 base pairs

TYPE: nucleic acid

STRANDEDNESS: unknown

TOPOLOGY: unknown

MOLECULE TYPE: DNA (genomic)

US-08-125-746-4

Query Match 97.2%; Score 953.8; DB 1; Length 957;
 Best Local Similarity 99.8%; Pred. No. 1.1e-275;
 Matches 955; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 25 GCACAGTTCTCAGAGGCTATGAAAGGCTTGGGACAGATGAGGAGCATCCTGACCTG 144
 Db 1 GCACAGTTCTCAGAGGCTATGAAAGGCTTGGGACAGATGAGGAGCATCCTGACCTG 120
 QY 85 GAAACTCTCCGAGGCTATGAAAGGCTTGGGACAGATGAGGAGCATCCTGACCTG 144
 Db 61 GAAACTCTCCGAGGCTATGAAAGGCTTGGGACAGATGAGGAGCATCCTGACCTG 120
 QY 145 TTGACATCCCGAAGTAATGCTCAGCGCCAGGAAATCTCTGCGAGCTTTTAAAGACTCTGTTT 204
 Db 121 TTGACATCCCGAAGTAATGCTCAGCGCCAGGAAATCTCTGCGAGCTTTTAAAGACTCTGTTT 180

RESULT 7

US-09-643-597-261

: Sequence 261, Application US/09643597

: Patent No. 6426072

: GENERAL INFORMATION:

: APPLICANT: Wang, Tongtong

: APPLICANT: Fan, Liqun

: APPLICANT: Kalos, Michael D.

: APPLICANT: Bangur, Chaitanya S.

: APPLICANT: Hosken, Nancy

: APPLICANT: Fanger, Gary R.

: APPLICANT: Li, Samuel X.

: APPLICANT: Wang, Aijun

: APPLICANT: Skeiky, Yasir A.W.

: APPLICANT: Henderson, Robert A.

: APPLICANT: McNeill, Patricia D.

: TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY

: TITLE OF INVENTION: AND DIAGNOSIS OF LUNG CANCER

: FILE REFERENCE: 210121.455C11

QY 205 GCGAGGATCTTCTCGATGACCTGAAATCAGAACTAACTGGAAAAATTTGAAAAATTAATT 264
 Db 181 GCGAGGATCTTCTCGATGACCTGAAATCAGAACTAACTGGAAAAATTTGAAAAATTAATT 240
 QY 265 GTGGCTCTGATGAAACCCCTCTCGGCTTTATGATGATCTTATGAACCTGAAACATGCTTGAAG 324
 Db 241 GTGGCTCTGATGAAACCCCTCTCGGCTTTATGATGATCTTATGAACCTGAAACATGCTTGAAG 300
 QY 325 GGAGCTGGAAACAAATGAAAACTACTGACAGAAATTTATGCTTCAAGGACACCTGAAGAA 384
 Db 301 GGAGCTGGAAACAAATGAAAACTACTGACAGAAATTTATGCTTCAAGGACACCTGAAGAA 360
 QY 385 CTGAGAGCCATCAACAAAGTTTATGAAGAGAAATATGCTTCAAGGCTGGAAGTACGCTG 444
 Db 361 CTGAGAGCCATCAACAAAGTTTATGAAGAGAAATATGCTTCAAGGCTGGAAGTACGCTG 420
 QY 445 GTGGGGACACTTTCAGGGTACTACAGCGGATGTTGGTGTCTCTCTCAGGCTAACAGA 504
 Db 421 GTGGGGACACTTTCAGGGTACTACAGCGGATGTTGGTGTCTCTCTCAGGCTAACAGA 480
 QY 505 GACCCTGATGCTGGAATGATGAAGCTCAAGTTGAACAGATGCTCAGGCTTTATTTTCAAG 564
 Db 481 GACCCTGATGCTGGAATGATGAAGCTCAAGTTGAACAGATGCTCAGGCTTTATTTTCAAG 540
 QY 565 GCTGGAGAACTTAAATGGGGACAGATGAAGAAAGTTTATCACCATCTTTGGAACACGA 624
 Db 541 GCTGGAGAACTTAAATGGGGACAGATGAAGAAAGTTTATCACCATCTTTGGAACACGA 600
 QY 625 AGTGTCTCTCATTTGAGAAAGTGTGTTGACAAAGTACATGACTATATCAGGATTTCAAAAT 684
 Db 601 AGTGTCTCTCATTTGAGAAAGTGTGTTGACAAAGTACATGACTATATCAGGATTTCAAAAT 660
 QY 685 GAGGAAACCATGACCGGAGAGCTTCTGCAATTTAGAGCAACTACTCTCTTCTGCTGTTG 744
 Db 661 GAGGAAACCATGACCGGAGAGCTTCTGCAATTTAGAGCAACTACTCTCTTCTGCTGTTG 720
 QY 745 AAATCTATTGGAAGTATACCTGCTTACCTGACAGAGACCTCTATTATGCTATGAAGGGA 804
 Db 721 AAATCTATTGGAAGTATACCTGCTTACCTGACAGAGACCTCTATTATGCTATGAAGGGA 780
 QY 805 GCTGGGACAGATGATCATACCTCTCATCAGAGTATGCTTCCAGGAGTGAAGTGAATCTG 864
 Db 781 GCTGGGACAGATGATCATACCTCTCATCAGAGTATGCTTCCAGGAGTGAAGTGAATCTG 840
 QY 865 TTTAATCATCAGGAAGGAGTTAGGAGAAATTTTCCACCTCTCTTTTATCCATGATTAAAG 924
 Db 841 TTTAATCATCAGGAAGGAGTTAGGAGAAATTTTCCACCTCTCTTTTATCCATGATTAAAG 900
 QY 925 GGAGATACATCTGGGACTATAAGAAAGCTTCTGCTGCTCTCCCGGAGAGATGAC 981
 Db 901 GGAGATACATCTGGGACTATAAGAAAGCTTCTGCTGCTCTCCCGGAGAGATGAC 957

Db 982 CTGTTTAAACATCAGGAGGAGTTAGGAAGAATTTGGCCACCTCTCTTTATTCCATGATT 1041
 QY 922 AAGGGAGATACATCTGGGAGCTATAAGAAAGCTCTTCTGCTGCTCTCCGGAGAGATGAC 981
 Db 1042 AAGGGAGATACATCTGGGAGCTATAAGAAAGCTCTTCTGCTGCTCTGTGGAGAGATGAC 1101

RESULT 7

AA91821
 ID AAN91821 standard; DNA; 1605 BP.

XX AC AAN91821;
 XX AC 25-MAR-2003 (updated)
 DT 16-MAR-1990 (first entry)
 XX DT
 DE Endonexin II complete cDNA.
 XX KW
 KW Placenta; blood coagulation
 XX OS
 OS Homo sapiens (human).

Key Location/Qualifiers
 CDS 160..1119
 /*tag= a

EP339285-A.
 02-NOV-1989.
 30-MAR-1989; 89EP-0105626.
 31-MAR-1988; 88US-0176802.
 (RORER) RORER INT OVERSEAS INC.

Kaplan R, Jaye M;
 WPI; 1989-317181/44.
 P-PSDB; AAP91021.

Recombinant human endonexin II - which inhibits blood coagulation
 and phospholipase A2 and is used as an antiinflammatory agent
 Claim 1; fig. 1; 13pp; English.
 hENII is a calcium and phospholipid binding protein.
 {Updated on 25-MAR-2003 to correct PA field.}

Sequence 1605 BP; 447 A; 337 C; 366 G; 455 T; 0 other;

Best Match
 Best Local Similarity 99.8%; Score 956.8; DB 10; Length 1605;
 Matches 958; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 22 ATGGCAGAGTTCTCAGAGGCACTGTGACTGACTTCCCTGGATTGTGAGCGGCTGAT 81
 Db 160 ATGGCAGAGTTCTCAGAGGCACTGTGACTGACTTCCCTGGATTGTGAGCGGCTGAT 219
 QY 82 GCAGAACTCTTCGGAAGGCTATGAAGGCTTGGGCACAGATGAGGAGCATCCTGACT 141
 Db 220 GCAGAACTCTTCGGAAGGCTATGAAGGCTTGGGCACAGATGAGGAGCATCCTGACT 279
 QY 142 CTGTTGACATCCGGAAGTAATGCTCAGCGCCAGGAATCTCTGCAGCTTTTAAGACTCTG 201
 Db 280 CTGTTGACATCCCGAAGTAATGCTCAGCGCCAGGAATCTCTGCAGCTTTTAAGACTCTG 339
 QY 202 TTGGCAGGATCTTCTGGATGACTGAAATCAGAACTAACTGGAATAATTTGAAAATTA 261
 Db 340 TTGGCAGGATCTTCTGGATGACTGAAATCAGAACTAACTGGAATAATTTGAAAATTA 399
 QY 262 ATTGTGCTCTGATGAACCTCTCGGCTTTATGATGCTTATGAACCTGAACATGCTCTG 321

||||| 400 ATTGTGGCTCTGATGAAACCTCTCGGCTTTATGATGCTTTATGAACTGAACATCCCTTG 459
 QY 322 AAGGGAGCTGGAACAAATGAAAGCTACTGACAGAAATTTATGCTTCAAGGACACCTGAA 381
 Db 460 AAGGGAGCTGGAACAAATGAAAGCTACTGACAGAAATTTATGCTTCAAGGACACCTGAA 519
 QY 382 GAAGTGAGAGCCATCAACAAAGTTTATGAAGAAGATATGGCTCAAGCTCGAAGATGAC 441
 Db 520 GAAGTGAGAGCCATCAACAAAGTTTATGAAGAAGATATGGCTCAAGCTCGAAGATGAC 579
 QY 442 GTGGTGGGGACACTTCCAGGCTACTACCAGCGGATGTTGGTGGTTCTCTCTCAGGCTAAC 501
 Db 580 GTGGTGGGGACACTTCCAGGCTACTACCAGCGGATGTTGGTGGTTCTCTCTCAGGCTAAC 639
 QY 502 AGAGACCTGATGCTGGAATTTGATGAAGCTCAAGCTTGAACAAAGATGCTCAGGCTTTATT 561
 Db 640 AGAGACCTGATGCTGGAATTTGATGAAGCTCAAGCTTGAACAAAGATGCTCAGGCTTTATT 699
 QY 562 CAGGCTGGAGAACTTAAATGGGGACAGATGAAGAAAGTTTATCACCATCTTTTGAACA 621
 Db 700 CAGGCTGGAGAACTTAAATGGGGACAGATGAAGAAAGTTTATCACCATCTTTTGAACA 759
 QY 622 CGAAGTGTCTCTCATTTGAGAAAGCTTCTGACAAAGTACATGACTATATCAGGATTTCAA 681
 Db 760 CGAAGTGTCTCTCATTTGAGAAAGCTTCTGACAAAGTACATGACTATATCAGGATTTCAA 819
 QY 682 ATTGAGGAAACCATTTGACCGGAGACTTCTGGCAATTTAGAGCAACTACTCTTGTCTTT 741
 Db 820 ATTGAGGAAACCATTTGACCGGAGACTTCTGGCAATTTAGAGCAACTACTCTTGTCTTT 879
 QY 742 GTGAAATCTATTGGAAGTATACCTGCTACCTTGGCAGACACCTCTATTATGCTATGAAG 801
 Db 880 GTGAAATCTATTGGAAGTATACCTGCTACCTTGGCAGACACCTCTATTATGCTATGAAG 939
 QY 802 GGAGCTGGGACAGATGATCATACCTCTCAGAGTATGTTTCCAGGAGTGAGATTGAT 861
 Db 940 GGAGCTGGGACAGATGATCATACCTCTCAGAGTATGTTTCCAGGAGTGAGATTGAT 999
 QY 862 CTGTTTAAACATCAGGAGGAGTTTAGGAAGATTTTGGCACCCTCTCTTTATTCATGATT 921
 Db 1000 CTGTTTAAACATCAGGAGGAGTTTAGGAAGATTTTGGCACCCTCTCTTTATTCATGATT 1059
 QY 922 AAGGGAGATACATCTCGGGACTATAAGAAAGCTCTTCTGCTGCTCTCCGAGAGATGAC 981
 Db 1060 AAGGGAGATACATCTCGGGACTATAAGAAAGCTCTTCTGCTGCTCTCCGAGAGATGAC 1119

RESULT 8

AA90112
 ID AAN90112 standard; DNA; 1575 BP.

XX AC AAN90112;
 XX AC 25-MAR-2003 (updated)
 DT 01-NOV-1989 (first entry)
 XX DT
 DE Anticoagulant PP4 DNA.
 XX KW
 KW Anticoagulant; PP4 protein; thromboplastin.
 XX OS
 OS Homo sapiens (human).
 XX FH
 FH Key Location/Qualifiers
 FT polyA_signal 1539..1575
 FT /*tag= a
 FT CDS 107..1066
 FT /*tag= b
 XX EP318703-A.
 XX PD 07-JUN-1989.

OS Homo sapiens (human).
 XX Key Location/Qualifiers
 FT CDS 160..1119
 FT /*tag= a
 XX
 PN EP339285-A.
 XX
 PD 02-NOV-1989.
 XX
 PF 30-MAR-1989; 89EP-0105626.
 XX
 PR 31-MAR-1988; 88US-0176802.
 XX
 PA (RORE) ROBER INT OVERSEAS INC.
 XX
 PI Kaplan R, Jaye M;
 XX
 DR WPI; 1989-317181/44.
 DR P-PSDB; AAP91021.
 XX
 CC Recombinant human endonexin II - which inhibits blood coagulation
 PT and phospholipase A2 and is used as an antiinflammatory agent
 XX
 PS Claim 1; fig. 1; 13pp; English.
 XX
 CC henII is a calcium and phospholipid binding protein.
 CC (Updated on 25-MAR-2003 to correct PA field.)
 CC
 SQ Sequence 1605 BP; 447 A; 337 C; 366 G; 455 T; 0 other;
 Query Match 97.5%; Score 956.8; DB 10; Length 1605;
 Best Local Similarity 99.8%; Pred. No. 6.3e-268;
 Matches 958; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
 QY 22 ATGGCACAGGTTCTCAGAGGCACTGTGACTGACITCCCTGGATTGATGAGCGGCTGAT 81
 DB 160 ATGGCACAGGTTCTCAGAGGCACTGTGACTGACITCCCTGGATTGATGAGCGGCTGAT 219
 QY 82 GCAGAACTCTTCGGAAGGCTATGAAGGCTTTGGGCACAGATGAGGAGCATCTCTGACT 141
 DB 220 GCAGAACTCTTCGGAAGGCTATGAAGGCTTTGGGCACAGATGAGGAGCATCTCTGACT 279
 QY 142 CTGTTGACATCCCGAAGTAATGCTCAGCGCCAGGAATCTCTGACGCTTTTAAGACTCTG 201
 DB 280 CTGTTGACATCCCGAAGTAATGCTCAGCGCCAGGAATCTCTGACGCTTTTAAGACTCTG 339
 QY 202 TTTGGCAGGATCTTCTGGATGACCTGAATCAGAACTAACTGGAAATTTGAAATTA 261
 DB 340 TTTGGCAGGATCTTCTGGATGACCTGAATCAGAACTAACTGGAAATTTGAAATTA 399
 QY 262 ATTGTGCTCTGATGAACCTCTCGGCTTTATGATGCTTATGAACCTGAACATGCTCTG 321
 DB 400 ATTGTGCTCTGATGAACCTCTCGGCTTTATGATGCTTATGAACCTGAACATGCTCTG 459
 QY 322 AAGGAGCTGGAAACAAATGAAGTAAGTAAGTAAGTAAGTAAGTAAGTAAGTAAGTAAGTA 381
 DB 460 AAGGAGCTGGAAACAAATGAAGTAAGTAAGTAAGTAAGTAAGTAAGTAAGTAAGTAAGTA 519
 QY 382 GAAGTGAAGCCATCAACAAAGTTTATGAAGTAAGTAAGTAAGTAAGTAAGTAAGTAAGTAAGTA 441
 DB 520 GAAGTGAAGCCATCAACAAAGTTTATGAAGTAAGTAAGTAAGTAAGTAAGTAAGTAAGTAAGTA 579
 QY 442 GTGCTGGGGACACTTCAGGCTACTACCGGCTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTT 501
 DB 580 GTGCTGGGGACACTTCAGGCTACTACCGGCTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTT 639
 QY 502 AGAGACCTGATGCTGGAATTTGATGAAGCTCAAGTTGAACAAAGTCTCAGGCTTTATTT 561
 DB 640 AGAGACCTGATGCTGGAATTTGATGAAGCTCAAGTTGAACAAAGTCTCAGGCTTTATTT 699
 QY 562 CAGCTGGAGAACTTAATGGGGACAGATGAAGAAAGTTTATCACCATCTTTGGAAACA 621
 DB 1119

DB 700 CAGGCTGGAGAACTTAATGGGGACAGATGAAGAAAGTTTATCACCATCTTTTGGACA 759
 QY 622 CGAAGTGTCTCTCATTTGAGAAAGTGTCTTTCACAAAGTACATGATATATCAGGATTTCAA 681
 DB 760 CGAAGTGTCTCTCATTTGAGAAAGTGTCTTTCACAAAGTACATGATATATCAGGATTTCAA 819
 QY 682 ATTGAGAAACCATTTGACCGGAGACTTCTGGCAATTTTAGAGCAACTACTCTTCTGCTGTT 741
 DB 820 ATTGAGAAACCATTTGACCGGAGACTTCTGGCAATTTTAGAGCAACTACTCTTCTGCTGTT 879
 QY 742 GTGAATCTATTGCAAGTATATACCTGCTTACCTTGCAGAGACCCCTCTATTATGCTATGAAG 801
 DB 880 GTGAATCTATTGCAAGTATATACCTGCTTACCTTGCAGAGACCCCTCTATTATGCTATGAAG 939
 QY 802 CGAGCTGGACAGATGATCATACCTCTCATCAGAGTCTGTTTCCAGGAGTGAGATGAT 861
 DB 940 GGAGCTGGACAGATGATCATACCTCTCATCAGAGTCTGTTTCCAGGAGTGAGATGAT 999
 QY 862 CTGTTTAAACATCAGGAGGAGTTTAGGAAGATTTTGGCACCTCTCTTATTTCCATGATT 921
 DB 1000 CTGTTTAAACATCAGGAGGAGTTTAGGAAGATTTTGGCACCTCTCTTATTTCCATGATT 1059
 QY 922 AAGGAGATACATCTGGGAGCTATAAAGAAAGCTCTTCTGCTGCTCTCCGAGAAAGATGAC 981
 DB 1060 AAGGAGATACATCTGGGAGCTATAAAGAAAGCTCTTCTGCTGCTCTGTGGAGAGATGAC 1119
 RESULT 9
 AAN90112
 ID AAN90112 standard; DNA; 1575 BP.
 XX AC AAN90112;
 XX 25-MAR-2003 (updated)
 DT 01-NOV-1989 (first entry)
 XX Anticoagulant PP4 DNA.
 DE Anticoagulant; PP4 protein; thromboplastin.
 KW Homo sapiens (human).
 XX Key Location/Qualifiers
 FT polyA_signal 1539..1575
 FT /*tag= a
 FT CDS 107..1066
 FT /*tag= b
 XX EP318703-A.
 PN
 XX 07-JUN-1989.
 XX 29-OCT-1988; 88EP-0118039.
 XX 03-NOV-1987; 87DB-3737239.
 XX (BEHW) BEHRINGWERKE AG.
 PI Grundmann U, Abel KJ, Kupper H;
 XX WPI; 1989-166767/23.
 XX New DNA sequence encoding anticoagulant PP4 protein
 PT - and new recombinant protein, vectors, antibodies, etc..
 PT useful therapeutically and diagnostically.
 XX Claim 1; table 1; 14pp; German.
 XX DNA sequence encoding anticoagulant PP4 protein. This
 CC inhibits blood coagulation at the thromboplastin stage.
 CC The derived protein is 320 amino acids.
 CC (Updated on 25-MAR-2003 to correct PF field.)
 CC (Updated on 25-MAR-2003 to correct PR field.)